

S A L T   R I V E R   D A Y   S C H O O L

Individualized Physical Fitness  
Program

I. Vital Statistics

- A. School Name and Address: Salt River Day School  
Route 1, Box 117  
Scottsdale, Az 85256
- B. Component Cost: \$21,907.00
- C. Staffing Pattern: Professional - One Physical  
Education Teacher (Title I)  
Paraprofessional - Two  
Physical Education Aides  
(Title I)
- D. Number of Student Participants: 107
- E. Contact Person: Principal
- F. Operational Period: January to May
- G. Years in Operation: Five months

II. Component Objectives

One hundred seven (107) students in grades 1-6 will raise their physical fitness score to the 50th percentile or higher as measured by the Glover Youth and A.A.H.P.E.R. Fitness Test.

III. Evaluation

Pre-Post Glover Youth Fitness Test  
Pre-Post A.A.H.P.E.R. Fitness Test

IV. Procedures

Students were involved in an individualized physical fitness program one period daily. The program provided activities to remediate deficiencies in basic skill development such as: speed, endurance,

coordination, lateral movement, etc. The Universal Gladiator was used to reinforce other activities.

Table 79

Glover Youth Fitness Test  
Ages 6 thru 9

Test Periods	GRADE LEVEL							
	1		2		3		4	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (1-19-72)	23	24	19	34	18	19	13	15
Post-Test (5-8-72)	22	69	19	74	18	61	13	49
Amount of Gain or Loss (+ -)	—	—	—	—	—	—	—	—
	+4	+45		+40		+42		+34

N\* = Number of Students

\*\* = Results in "Mean" column figured on percentile. Average norm 50th percentile.

Table 80

A.A.H.P.E.R. Fitness Test  
Ages 10 through 12

Test Periods	GRADE LEVEL							
	4		5		6			
	N*	Mean	N*	Mean	N*	Mean		
Pre-Test (1-19-72)	7	17	24	16	22	23		
Post-Test (5-8-72)	7	42	24	38	22	48		
Amount of Gain or Loss (+ -)	—	—	—	—	—	—	—	—
		+25		+22		+25		

N\* = Number of Students

\*\* = Results in "Mean" column figured on percentile. Average norm 50th percentile.

## V. Discussion

The pre-post Glover Physical Fitness Test for pupils, ages 6 to 9, at Salt River Day School are summarized in Table 79. An examination of the pre-test scores presented in Table 79 shows that the pupils in each age group were far below the national average percentile ranking of the 50th percentile. After less than four months pupils age 9 were 19 percentile points above the national norm, pupils age 10 were 24 points above the national norm, pupils age 11 were 11 points above the national norm, and pupils age 12 were only one percentile point below the national norm.

The pre-post American Association of Health, Physical Education and Education (A.A.H.P.E.R.) physical Fitness test results for pupils age 10 to 12 are summarized in Table 80. The reported results show that age 10 pupils increased their physical fitness scores 25 percentile points, age 11 pupils increased theirs 22 points, and age 12 pupils increased theirs by 25 percentile points. However, these increases were not sufficiently large enough to bring the pupils up to the 50th percentile national norm.

P O L A C C A   D A Y   S C H O O L

Physical Fitness

I. Vital Statistics

- A. Name and Address of School: Polacca Day School  
Hopi Agency  
Polacca, Arizona 85040
- B. Component Cost: \$3,472.00
- C. Staffing Pattern: Professional - None  
Paraprofessional - One  
Physical Fitness Aide  
(Title I)
- D. Number of Student Participants: 164
- E. Contact Person: Fritz Poocha, Principal
- F. Operational Period: September to May
- G. Years in Operation: One

II. Component Objectives

One hundred sixty-four (164) students, grades 1 to 6, will raise their scores to the 50th percentile or higher as measured by the Glover Youth Fitness Test.

III. Evaluation

Pre-Mid-Post Glover Youth Fitness Test

IV. Procedures

Students received one hour of instruction daily from a physical fitness aide. Twenty-eight students comprised each class. The aide directed the following activities: gymnastics, isometric and isotonic strength building, team sports, track and field, and eye-hand coordination drills. Completion of a timed obstacle course run completed each activity.

Table 81

Clover Physical Fitness Test  
Polacca Day School

G I R L S

Test Periods	Age 6		Age 7		Age 8		Age 9		Age 10		Age 11		Age 12	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test	15	23	19	33	9	22	15	21	10	26	13	29	4	31
Post-Test	12	47	19	46	9	44	15	33	10	24	13	29	4	30
Amt of Gain or Loss (+ -)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		+ 24		+ 13		+ 22		+ 12		- 02		--		- 01

B O Y S

Test Periods	Age 6		Age 7		Age 8		Age 9		Age 10		Age 11		Age 12	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test	8	36	10	42	9	32	14	36	10	32	15	18	10	23
Post-Test	8	52	10	52	10	50	14	41	10	33	15	23	8	28
Amt of Gain or Loss (+ -)	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		+ 16		+ 10		+ 18		+ 05		+ 01		+ 05		+ 05

N\* = Number of Students Tested

Mean = Mean Percentile

## V. Discussion

The results of the Glover Physical Fitness Test for boys and girls age 6 - 12 attending Polacca are summarized in Table 81. These results show that girls age 6, 7, 8, and 9 increased their physical fitness percentile ranking whereas girls age 10, 11, and 12 decreased their percentile ranking using national norms. On the other hand boys in each age category increased their percentile rankings. In fact boys age 6, 7, and 8 reached or exceeded the national average of the 50th percentile in physical fitness.

## H O P I     D A Y     S C H O O L

### Physical Fitness Project

#### I. Vital Statistics

- |                                    |   |
|------------------------------------|---|
| A. School Name and Address:        | Hopi Day School<br>Hopi Agency<br>Oraibi, Arizona 86039 |
| B. Component Cost:                 | \$8,296.00  |
| C. Staffing Pattern:               | Professional - One Physical<br>Education Coach (1740)   |
| D. Number of Student Participants: | 61  |
| E. Contact Person:                 | Ray K. Wood, Principal                                  |
| F. Operational Period:             | September to May  |
| G. Years in Operation:             | One   |

#### II. Component Objectives

To raise the physical fitness level of the 61 target group students, grades 4-8, to the 50th percentile as measured by the President's Council on Physical Fitness.

#### III. Evaluation

Pre-Mid-Post President's Council on Physical Fitness

#### IV. Procedures

A regular program physical education teacher provided instruction to facilitate muscular development and coordination. Students participated a total of 3 hours per week. The curriculum was designed around an obstacle course and Giant Outdoor Physical Fitness unit with related activities.

Table 82

Glover Physical Fitness Items for Primary  
Children (9 year olds), A.A.H.P.E.R.  
Youth Test Manual  
G I R L S

Test Periods	GRADE LEVEL															
	9		10		11		12		13		14		15		16	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (September 1971)	3	16	0	-	2	12	2	14	10	21	14	17	2	19	0	-
Post-Test (May '72)	3	51	0	-	2	28	2	35	10	36	13	30	0	-	0	-
Amount of Gain or Loss (+ -)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		+35		-		+16		+21		+15		+13		-		-

N\* = Number of Students Tested

Mean refers to the mean of the mean percentile.



Table 83

Glover Physical Fitness Items for  
Primary Children (9 year olds)  
A.A.H.P.E.R. Youth Fitness  
Test Manual

B O Y S

Test Periods	GRADE LEVEL															
	9		10		11		12		13		14		15		16	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (September 1971)	2	11	4	14	1	14	4	21	11	19	17	16	6	17	0	-
Post-Test (May '72)	2	64	4	22	1	38	3	50	10	43	17	40	6	34	0	-
Amount of Gain or Loss (+ -)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		+53		+ 8		+24		+29		+24		+24		+17		-

N\* = Number of Students Tested

Mean refers to the mean of the mean percentiles

## V. Discussion

The pre-post Glover Physical Fitness Test results for age 9 to 15 girls and boys are reported in Table 82 and 83 respectively. An examination of Table 82 shows that there were increases in physical fitness for girls in all age ranges, however, only in girls age 9 was the objective of raising the average physical fitness to the 50th percentile met. In addition, the two 15 year old girls were not measured on the post-test.

An examination of Table 83 shows that boys age 9 and 12 achieved the objective of an average physical fitness score at the 50th percentile. In fact the two age 9 boys increased their average percentile from 19 to 64 which is an increase of 53 points. Although the other ages did not attain the objectives, they did substantially improve in their physical fitness.

S E C O N D      M E S A      D A Y      S C H O O L

Physical Fitness

I. Vital Statistics

- A. School Name and Address:                      Second Mesa Day School  
   Hopi Agency  
   Second Mesa, Arizona 86043
- B. Component Cost:                                      \$5,555.00
- C. Staffing Pattern:                                      Paraprofessional - One  
   Physical Fitness Aide  
   (Title I)
- D. Number of Student Participants:                      89
- E. Contact Person:                                      Wellesley Hodgins, Principal
- F. Operational Period:                                      September to May
- G. Years in Operation:                                      One

II. Component Objectives

Eighty-nine (89) students, grades 1 to 6, will increase their scores on the President's Council Test on Physical Fitness to the 50th percentile.

III. Evaluation

Pre-Mid-Post President's Council Test on Physical Fitness

IV. Procedures

Students participated approximately 2½ hours per week in the following activities: balance beam exercises, eye-hand coordination drills, volleyball, basketball, social dancing, health and hygiene classes.

These activities were supervised by a physical education aide.

Classes were restricted groups no larger than 8.

Table 84

Glover and A.A.H.P.E.R. Test, Boys, Second Mesa Day School

Test Periods	A G E G R O U P											
	9		10		11		12		13			
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test	11	7.0	17	18.5	14	13.6	8	12.3	1	10.0		
Post-Test	5	21.8	6	30.0	8	21.5	8	24.3	4	26.9		
Amount of Gain or Loss (+ or -)												
		+14.8		+11.5		+ 7.9		+12.0		+16.9		

N\* = Number of Students Tested

Mean = Mean Percentile

Table 85

Glover and A.A.H.P.E.R. Test, Girls, Second  
Mesa Day School

Test Periods	A G E G R O U P							
	9		10		11		12	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test	8	8.6	15	17.3	16	22.6	11	28.0
Post-Test	4	28.0	16	30.2	8	25.1	12	40.9
Amount of Gain or Loss (+ or -)		+19.4		+12.9		+ 2.5		+12.9

N\* = Number of Students Tested

#### V. Discussion

The pre-post Glover and A.A.H.P.E.R. Physical Education Test results for Second Mesa Day School are summarized in Table 85 (Girls) and Table 84 (Boys). An examination of Table 85 shows gains in physical fitness for girls ranging from +2.5% (11 year olds) to +19.4% (9 year olds). Twelve year old girls came closest to the national average of the 50th percentile with an average ranking of the 40.9 percentile on the post-test.

The results for boys (Table 84) show gains in physical fitness ranging from +7.9% (11 year olds) to +16.9% (13 year olds). Ten year old boys came closest to the national average with a post-test average at the 30th percentile.

S H E R M A N    I N D I A N    H I G H    S C H O O L

Adapted Physical Education, Physical Fitness

I. Vital Statistics

- A. Name and Address: Sherman Indian High School  
9010 Magnolia Avenue  
Riverside, California 92503
- B. Component Cost: \$22,548.00
- C. Staffing Pattern: Professional  
1 Physical Education Teacher  
(1740)  
  
Paraprofessional  
1 Teacher Aide (Title I)
- D. Number of Student Participants: 90
- E. Contact Person: Mike Ragsdale
- F. Operational Period:
- G. Years in Operation: One

II. Component Objectives

To increase the physical fitness scores of 90 students in grades  
9 - 12 to the 50th percentile or higher as measured by the AAHPER  
Physical Fitness Test.

III. Evaluation

Pre-Mid-Post AAHPER Physical Fitness Test.

Pre-Mid-Post California Achievement Test.

IV. Procedures

Activity I

Through the analysis of performance scores, individual programs  
of progressive muscular resistance exercises both isometric and

isotonic were developed and assigned to students to correct specific weaknesses of muscular groups and cardiovascular efficiency. The DeLorme method of progressive resistance using repitition, time, and/or weight was utilized to enable students to increase their level of fitness commensurate to their needs.

#### Activity II

A modified gymnastics program for 90 deficient students was conducted in order to improve physical skills and increase organic efficiency.

#### Results:

Due to a number of extenuating circumstances, this component was late in starting and consequently no data is reported.

## S U M M A R Y

### Psychomotor Domain

Activities in the psychomotor domain were primarily designed to increase the neuromuscular skills and coordination of pupils. There were seven professional and 8 paraprofessional Title I staff serving 670 pupils in six schools. The total amount of money expended in the psychomotor domain was \$90,405.

An examination of the data relating to psychomotor domain projects shows there were increases in physical fitness in pupils in every project in almost every age range. There were a few isolated instances (girls age 10, 11, and 12 attending Polacca) where no increases or even decreases in physical fitness were found. However the overall effect was an increase in physical fitness in every school.



## C H A P T E R    VII

### Introduction

This chapter contains very brief summaries, conclusions, and recommendations of the cognitive, affective, and psychomotor components for FY 1971-72. The reader should keep in mind that these summaries are an attempt to give the reader a very short and concise overview of the projects. For more in-depth information concerning the merits of the projects, it is recommended that the reader go to the individual chapters in each of the areas.

## S U M M A R Y

### Cognitive Domain Components (1)

Components in the cognitive domain had as their objectives improved reading and communication skills, improved mathematics skills, improved science, and special education opportunities. Procedures selected for reaching stated goals varied greatly and included such things as special purpose instrumentation, individualized techniques, and specialized personnel.

A total of \$812,737 was expended for components in the cognitive domain. By far the largest concentration of funds (\$750,720) was in reading components followed by science components (\$32,655), math components (\$19,038), and special education (\$10,324).

In reading there were 34 professional and 50 paraprofessional staff serving 1718 students. Special education had one professional serving 60 students, math and science both had one professional and one paraprofessional Title I staff serving 60 students.

## C O N C L U S I O N S

### Cognitive Domain Components

An examination of the data pertaining to the various cognitive domain components shows that there were increases in reading, language, and total academic achievement in almost every component. On the other hand, whereas one school had increases in achievement that were higher than the increases reported in another school at one grade level, the trend was often reversed in the next grade level. In addition there were no clear distinctions in pupil performance among the three types of reading components. All one can really say is there were some unknown factors producing changes in pupil performance in one grade level and inhibiting such changes at the next grade level.

#### Recommendations:

1. In previous years the trend has been that beginning in grade 3 pupils begin losing in achievement rather than gaining, and this trend becomes more accelerated throughout the pupils remaining academic years. The data presented in this report shows that this trend has been reversed in some grade levels and thus these programs should be continued. In addition, further evaluation

should be done to determine reasons why some components were unable to reverse the trend. This evaluation should be an ongoing analyses and appraisal that will let the teachers know immediately whether or not the techniques are working and if the pupils are achieving stated objectives. If the techniques are not working then the teachers can revise the program rather than wait until the following year to make necessary changes.

2. Data collection efforts should become more sophisticated and include more varied data. For example, data pertaining to teachers and the individual students that includes such things as absentee rate, teaching experience, etc. should be analyzed as it relates to success in the academic program.
3. In addition, it is recommended that data be gathered from regular program pupils so that comparative studies of Title I and regular program pupils can be made.
4. Finally, data from non-instructional activities such as counseling should be analyzed to determine their effect on the academic programs. Data is currently being gathered, however the procedures are not systematic and an analysis is not possible from data gathered in an unsystematic manner.

## AFFECTIVE DOMAIN COMPONENTS

### S U M M A R Y

There were a number of different components in the affective domain, however, they can be categorized into three broad areas - vocational guidance, self image of the pupils, and dropout prevention. A total of \$315,500 was expended for components in the affective domain. Most of this total, 61.8% or \$195,067, was used in dropout prevention projects where 17 professional and 17 paraprofessional staff members served 590 pupils. The second largest expenditure was in the area of increasing self image (\$90,827) where 12 professionals and 6 paraprofessionals worked with 289 pupils. The smallest expenditure was in vocational guidance (\$29,606) where one professional and one paraprofessional worked with 170 pupils.

### C O N C L U S I O N S

The results presented in the affective domain show that all components were not completely successful. For example, in the dropout prevention program at Sherman Indian High School the dropout rate increased 2.9% (from 17.4% to 20.3%) in FY 1971-72. The projects in the "self-image" area are not comparable since each component used a different scoring system for the FAATE. Even so, the results for each component

were mixed which means that pupils had more positive attitudes towards themselves, school, etc. in some schools and more negative attitudes in others.

#### Recommendations

There will be no Title I funded affective domain components in FY 1972-73. However it is hoped that each school will take into account the motivations, interests, and personalities of their pupils and that some measures of these important variables will be taken. Because Title I guidelines will not allow continuation of affective domain components, other sources of funds should be sought.

## PSYCHOMOTOR DOMAIN

### S U M M A R Y

Activities in the psychomotor domain were primarily designed to increase the neuromuscular skills and coordination of pupils. There were seven professional and eight paraprofessional staff serving 670 pupils in six schools. The total amount of money expended in the psychomotor domain was \$90,405.

### C O N C L U S I O N S

An examination of the data relating to psychomotor domain projects shows that there were increases in the physical fitness of pupils in every project and in almost every grade level. There were a few isolated instances (girls age 10, 11, and 12 attending Polacca) where no increases were found - in fact decreases in physical fitness were found in some of these instances. However the overall effect was positive and there were significant increases in physical fitness at every school. A number of pupils had average post-test physical fitness scores that exceeded the national average for their age range. Thus these results are promising.

### Recommendations

1. The present results show that even in the successful programs, most pupils were still below the national average in physical fitness. Thus, these programs should be continued and improved where possible to further accelerate the pupils physical fitness growth.
2. Further investigation should be incorporated to determine why certain components were more successful than others.
3. Each LEA (Local Education Agency) must give serious consideration to the priorities of students over-all needs in order to determine whether or not to use Title I funds for psychomotor programs.



Directions for Changes for FY 1973

C H A P T E R      V I I I

The three tables in this chapter indicate the changing trend of Title I operations in the Phoenix Area relative to (1) funding by component domain, (2) children participating by type of component, and (3) Title I salaried staff by type of component.

The most notable change reflected in all three tables is the evident decrease and eventual elimination of all affective domain components.

All three tables also reflect a significant increase in funding, staff, and student participation in cognitive domain projects. It is interesting to note that while funding for cognitive domain projects has increased by \$728,320 since FY 1971 and staff positions have increased by 27 during the same period, the number of students involved in these projects has increased by only 465. This seemingly disproportionate increase in funding and staff has been necessary in order to insure effective concentration of services for the most seriously deficient students.

In the psychomotor domain the number of students has increased from 433 to 470, whereas the total funds expended has decreased from \$90,405 to \$54,902. The decrease in funding is due to regular program involvement and the initial expense incurred during establishment of pilot projects.

The changes reflected in these three tables are indicative of a general trend in the Phoenix Area to provide services most necessary for remediation of student academic deficiencies.

Table 86

Comparison of Amounts Funded in Components  
By Title I Funding Year\*

Title I Funding Year	A M O U N T S F U N D E D B Y C O M P O N E N T S					T O T A L S
	Cognitive	Affective	Psychomotor	O T H E R		
				Administration Coordination**	Contribution To Hopi Follow Thru	
1971	368,279	644,221	11,547	262,043	137,237	1,424,327
1972	812,737	315,500	90,405	141,728	46,839	1,407,209
1973	1,096,599	0	54,902	235,019	42,570	1,429,090

\* Funding Years 1971 and 1972 amounts represent actual expenditures, whereas funding year 1973 amounts represent allocation as of July 1, 1972.

\*\* Includes Area Office Administration Project.

Table 87

Comparison of Numbers of Students Participating  
in Title I Components by Funding Year

Title I Funding Year	Number of Students Participating by Components		
	Cognitive	Affective	Psychomotor
1971	2,177	2,059	133
1972	2,522	1,206	433
1973	2,642	0	470

Table 88

Comparison of Number of Professional and Paraprofessional  
Staff Positions Funded by Title I in Components by  
Title I Funding Year

Title I Funding Year	Number of Staff Positions Funded by Title I by Component									
	COGNITIVE		AFFECTIVE		PSYCHOMOTOR		T O T A L S			
	P*	PP*	P	PP	P	PP	P	PP	All	
1971	11	66	19	38	0	2	30	106	136	
1972	20	63	9	11	1	3	30	77	107	
1973	33	71	0	0	3	4	36	75	111	

\* Professional

\*\* Paraprofessional

A P P E N D I X    A

A Discription of Materials  
Used in Reading/Language Art Components

#### DISTAR READING PROGRAM:

The Distar Reading Program is a highly structured intensive curriculum of instruction in reading skills. It helps students gain systematic words decoding skills, while at the same time developing comprehension skills. The teacher's kit supplies detailed instructions for class drill and oral activities as well as useful charts and other visual materials. The students' "take homes" and wordbooks, provide appropriate individual activities, requiring silent reading and written responses. A class library of storybooks offers the children enjoyable reading experiences at their reading level.

#### LEARNING 100:

Learning 100 is an integrated total system of reading instruction. It does not supplement basal or traditional system which have failed so many of the Indian students already. Rather, it offers the students all modes needed for success in reading.

Non-readers are offered a thorough readiness program emphasizing following directions, word configuration, phonetic analysis, spatial relationships and listening comprehension. Special emphasis is devoted to developing oral communication skills.

The system is self-pacing and individualized because no student moves into the reading cycles until he is ready to read. Also each student progresses to a high level of abilities only after he becomes proficient in the lower level of that ability.

The laboratory contains various learning centers such as: controlled

reading visual training, and listening. Students move freely as they pace themselves through the cycles of learning. Cycles of learning and instruction contain constant reinforcement and check points for the teacher's evaluation of student progress.

LISTEN, LOOK AND LEARN:

Listen, Look and Learn is a system of oral language development and beginning reading instruction which combines development of all communication skills from readiness through primary language mastery.

It makes possible more thorough teaching and learning through:

- (1) introduction of concepts and skills in careful sequence, from simple to complex, to insure successful performance;
- (2) immediate reinforcement of initial learning of concepts and skills coupled with distributed practice to insure retention;
- (3) repeated exposures to the same concept or skill from many perspectives and in a variety of instructional contexts;
- (4) adaptation to each child's individual rate of progress. A given child might require less than three (3) to more than six (6) years to complete all cycles successfully depending on his ability, prior achievement, past experiences and motivation.

This system unites many of the new forms of audio-visual instruction with a variety of unique published materials. Careful control over perceptual development is insured through the use of instrument techniques.



Word attack and comprehension skills are developed through auto-instructional and teacher directed activities. Individualized reading in a multi-level high interest classroom library and extensive use of filmstrips and recordings offer enrichment opportunities. Continuous feedback and appraisal provide a guide for re-teaching, re-application and extension of skills and concepts.

LISTEN, LOOK AND LEARN:

Listen, Look and Learn is composed of twenty (20) Readiness stages and one hundred (100) pre-reading and instructional cycles. These systematic cycles of instruction include equipment, materials and procedures carefully designed to introduce and reinforce the skills, content and attitudes central to successful reading. Vocabulary, concepts and skills are introduced through Aud-X, an instrument that uses filmstrips and records in sight-sound synchronized motivation and instruction. The Tach-X which flashes visual materials at high speed reinforces vocabulary development and reduces recognition time until each word learned becomes identifiable at sight with minimal clues. Processing training provides for rapid association of words in context. The Controlled Reader develops visual efficiency, good left-to-right directional attack and fluency in silent reading.

READING 200:

Reading 200 is multi-media and multi-modal. A systems approach to communication skill development for fourth-, fifth-, and sixth-grade students.

It is largely self-instructional. The majority of the techniques are programmed for self-instruction and self-correction, allowing each student to progress in a continuous and systematic manner.

READING 200 includes:

Tach-X Accuracy Training--A nonverbal tachistoscopic program designed to heighten skills of visual discrimination, orderliness in seeing, and visual memory.

Controlled Reader Motility Training--A visual training program to build ocular motility, visual coordination, and directional attack.

Tach-X/Looking at Words and Looking at Words in Sentences--A vocabulary development and consolidation program stressing usage and context, word changing, and function with correlated tachistoscopic training to develop instant sight recognition and visual memory.

Aud-X Word Attack Review--Aud-X DEFA provides a review of phonics.

Listen and Think--A self-instructional listening program that develops listening skills.

Listen and Read--A listening program that develops reading skills through the frequently preferred modality of listening combined with correlated lesson book activities. (Levels 3-6) Listen and Read on levels 7-9 would be appropriate for advanced 6th graders.

Study skills library--A self-instructional and individualized program designed to provide text tactics for content areas of science, social studies, and the study skills of interpretation, evaluation, organization, and performance.

Controlled Reader Fluency Training--A program designed to build the basic perceptual, interpretive, and visual-functional skills that permit thorough, efficient, and fluent reading.

Controlled Reader Comprehension Power--A program that combines perceptual training with the intensive development of the comprehension skills of recall, association, interpretation, and evaluation.

Reading 200 is flexible in scheduling and format. A laboratory program can be designed to fit the instructional organization of any elementary school.

#### READING 300:

Reading 300 is a multi-media program--a system approach to reading improvement utilizing the following EDL techniques and materials: (1) Tach-X and Flash-X training to encourage rapid, accurate seeing and to strengthen visual memory; (2) Controlled Reading to heighten visual efficiency and to build fluency and thoroughness in reading; (3) Listening Programs to develop purposeful and flexible listening skills; (4) Word Clues to enrich and expand vocabulary; (5) Study Skills Library to improve reading in the content areas and to provide sequential and specific instruction in the vital study skills of interpretation, organization, evaluation, and reference; (6) Skimming and Scanning to develop skill in effective reading. Reading 300 is largely self-instructional. The majority of the techniques are programmed for self-instruction and self-correction, allowing each student to progress in a continuous and systematic manner.

Reading 300 is individualized. A four-phase testing program prior to the start of instruction makes it possible to determine the needs and starting level of each student. Multi-level materials makes it possible for each student to start at a level where he can achieve success.

Reading 300 is flexible. Its scheduling and format can be modified to fit the needs of most junior and senior high schools.

Reading 300 is comprehensive, providing instruction, training, or guidance in the areas which have been judged to be most critical to the development of effective and efficient readers:

1. Perceptual Accuracy  
Identification, recognition, retention
2. Visual efficiency  
Binocular coordination, ocular motility, left-or-right directional attack
3. Work Knowledge  
Word meanings and usage in context
4. Word Attack Skills  
Structural and phonetic analysis
5. Comprehension Fundamentals  
Recalling, understanding, associating
6. Interpretation of Meaning  
Inferring, predicting, comparing, concluding visualizing, sensing
7. Analytical Reading and Listening  
Form, Structure, detail
8. Critical Reading and Listening  
Relevancy, accuracy, validity, significance
9. Appreciation  
Sensitivity, interest, taste
10. Reference Skills  
Location of information, use of materials

11. Selective Reading  
Skimming and scanning
12. Reading and Study Habits  
Approaches, attitudes, interests, goals

#### SYSTEMS 80

Systems 80 is an audio-visual educational system applicable in many areas of teaching.

The Systems 80 audio-visual unit resembles a small table television. Instructional materials present such basic subjects as phonics, spelling and vocabulary building in a simple step by step progression.

These materials are designed to help teachers accomplish four (4) vital tasks essential to a complete understanding and direction of each child's individual development:

- (1) Diagnose each student's knowledge of a subject using pre and post evaluative tests,
- (2) Prescribe materials suitable for each student to advance his knowledge of the subject,
- (3) Teach each child that subject on an individual basis at his own learning rate,
- (4) Record and analyze each student's progress.

Each lesson consists of eighty (80) color pictures with audio teaching messages. At the end of each lesson, a progress check indicates level of success. A student will not progress into additional material until

he masters the present lesson. Review lessons are presented, and by covering previously learned materials they act as an effective aid to retention.

The following Systems 80 programs are available: Learning Letter Names, Learning Letter Sounds, Reading Words in Context and Developing Spelling Skills.

This synopsis was typed by Geraldine M. Williams and LuAnn M. Kelly.

#### IV. Procedures

##### Activity I

This activity was centered in a laboratory separate from the regular classrooms. This laboratory incorporated a combination of systems utilizing special equipment and language experience activities. The teacher to student and aide to student ratios were respectively 1 to 11 and 1 to 6. Students were involved in this activity five days per week, 50 minutes per day.

##### Activity II

Two aides, in addition to their laboratory duties, assisted the target students in the regular classroom by providing experiences which insured continuity between laboratory and regular program activities.

##### Activity III

One aide was used to offer library experiences four hours weekly. In addition local native artisans presented tribal culture, customs, arts, and crafts to the students one day per week.

##### Activity IV - Art Van

The Art Van staff provided services six days during the 1971-72 school year. During each visit the Title I reading groups participated in two working sessions lasting 45 minutes to an hour and one half. Each session related the use of art and cultural heritage to teach reading effectively. Some examples of the lessons included: puppets, drawing on leather skins, making models of shields, and painting murals. These projects were presented with vocabulary and concept building activities which related to the reading program.

Teacher workshops were held where school personnel desired. These workshops lasted two hours one or two days per visit.



Table 39

California Achievement Test - Total Reading, 1963 Norms  
Salt River Day School

Test Periods	GRADE LEVEL											
	1		2		3		4		5		6	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (9/18/71)	15	.63	11	.96	11	1.74	12	2.49	12	3.01	12	3.86
Post-Test (5/1972)	15	1.07	11	1.69	11	2.00	12	2.65	12	3.22	12	4.61
Amount of Gain or Loss (+ or -)	—	—	—	—	—	—	—	—	—	—	—	—
		+ .44		+ .73		+ .26		+ .16		+ .21		+ .75

N\* - Number of Students Tested

Mean\* - Mean Grade Equivalent Score

V. Discussion

The California Achievement Test - Total Reading scores for grades 1 to 6 for Salt River Day School are reported in Table 39. The results show that pupils in grade 2 and grade 6 had moderate increases in reading of .73 and .75 years respectively whereas pupils in grades 3, 4, and 5 had somewhat less gains in reading ability of only .26, .16, and .21 years respectively.

S H E R M A N      I N D I A N      H I G H      S C H O O L

Component II: Reading Development Laboratory

I. Vital Statistics

- A. School Name and Address: Sherman Indian High School  
9010 Magnolia Avenue  
Riverside, California 92503
- B. Component Cost: \$30,607.00
- C. Staffing Pattern: Professional - One Language  
Arts Specialist (1/5 time)  
(1740)  
Two Reading Teachers (1740)  
Paraprofessional - Two Teacher Aides (1740)
- D. Number of Student Participants: 250
- E. Contact Person: Michael Ragsdale
- F. Operational Period:
- G. Years in Operation: Two

II. Component Objectives

One hundred twenty-five (125) students, grades 9 and 10, will increase their reading scores 3.0 years as measured by California Achievement Test, Reading sub-scores.

Seventy-five (75) eleventh grade students will increase their reading scores 2.5 years as measured by the California Achievement Test, Reading sub-scores.

Fifty (50) twelfth grade students will increase their reading scores 2.0 years as measured by the California Achievement Test, Reading sub-scores.

### III. Evaluation

Pre-Mid-Post California Achievement Test, Reading sub-scores

### IV. Procedures

#### Activity I

This activity involved two laboratories: one utilizing EDL's Learning 100; the other utilizing EDL's Reading 300. The laboratories were located separate from the regular classrooms. Teacher to student and aide to student ratio was 1-15. Students were involved in this activity 45 minutes per day, five days per week.

Table 40  
California Achievement Test  
Reading

Test Periods	GRADE LEVEL							
	9		10		11		12	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (9-10-71)	35	5.75	55	6.40	39	6.70	32	6.75
Post-Test (4-2-72)	35	6.90	55	7.20	39	7.40	32	7.30
Amount of Gain or Loss (+ -)	—	—	—	—	—	—	—	—
		+1.15		+ .80		+ .70		+ .55

N\* - Number of Students Tested  
Mean\* - Mean Grade Equivalent Score

### V. Discussion

The pre-post California Achievement Test total reading scores for Sherman Indian High School are reported in Table 40. The results show that pupils in grade 9 increased their reading scores an average of 1.15 years which is an increase of approximately 1.6 months for every month in the program. In addition, pupils in grade 10 increased their scores .70 years, and pupils in grade 12 increased

their scores .55 years. While the average post-test reading scores were higher than the pre-test scores, the gains were not sufficient to raise the pupils scores to the national average.

Component I - Remedial Reading

A. School Name and Address:	Supai Day School Supai, Arizona 86435
B. Component Cost:	\$23,509.00
C. Staffing Pattern:	Professional - One Reading Specialist (Title I) Paraprofessional - One Teacher Aide (Title I)
D. Number of Students Participants:	46
E. Contact Person:	Mrs. Roberta Hunt, Principal
F. Operational Period:	
G. Years in Operation:	One

Forty-six (46) children, grades B-4, will increase their reading achievement scores to grade level as measured by the California Achievement Test, Reading subtests.

### Pre-Mid-Post California Achievement Test, Reading Subtests

This activity was designed around a highly structured comprehensive system utilizing E.D.L.'s LISTEN LOOK LEARN. The laboratory was incorporated into the regular classroom setting. Teacher to student and aide to student ratio was 1 to 9. The students were involved 2½ hours daily five days per week.

### Activity II - Art Van

The Art Van staff provided services four days during the 1971-72 school year. During each visit the Title I reading groups participated in two working sessions lasting 45 minutes to an hour and one half. Each session related the use of art and cultural heritage to teach reading effectively. Some examples of the lessons included: puppets, drawing on leather skins, making models of shields, and painting murals. These projects were presented with vocabulary and concepts building activities which related to the reading program.

Teacher workshops were held where school personnel desired. These workshops lasted two hours one or two days per visit.

Table 41

California Achievement Test  
Total Reading, 1970 Norms

Test Periods	GRADE LEVEL					
	2		3		4	
	N*	Mean	N*	Mean	N*	Mean
Pre-Test (10/19/71)	12	1.09	10	1.21	4	2.75
Post-Test (5/17/72)	12	1.94	12	2.18	6	3.98
Amount of Gain or Loss (+ or -)	—	+ .85	—	+ .97	—	+1.23

N\* - Number of Students Tested  
Mean\* - Mean Grade Equivalent Score

### V. Discussion

The pre-post California Achievement Test - Total Reading scores for 2nd to 4th grade pupils attending Supai Day School are summarized in Table 41. These results show that pupils in all three grades had average gains in reading that exceeded one month gain for every

month in school. Pupils in grade two increased their reading scores an average of .85 grades, pupils in grade 3 increased theirs an average of .97 grades, and pupils in grade 4 increased theirs an average of 1.23 grades even though only seven months had elapsed between pre and post tests.



COMPARISON OF READING COMPONENTS

Chapter IV-B

## I N T R O D U C T I O N

The results presented in this section consist of a comparison of the reading projects between schools and types of projects by grade level. This section is divided into three parts. The first part consists of comparisons between schools using the 1963 norms of the California Achievement Test (CAT); the second contains comparisons of schools using the 1970 norms of the CAT; and the third consists of a comparison of reading laboratories utilizing one or more of Educational Developmental Laboratories' (EDL) Systems, reading laboratories utilizing a combination of materials and special purpose equipment, and reading laboratories utilizing various types of materials but little or no special purpose equipment. The reason for the separation of parts I and II by CAT norms is that the norms are not comparable. The 1970 revision of the CAT was a substantive revision and a year's growth is not the same as a year's growth on the 1963 norms. The new edition has been made more relevant as a measurement instrument for measuring pupils in today's content.

Not all schools and grade levels are compared in this section because of missing data and too few pupils for which data was reported. An arbitrary cut-off of four pupils per grade level per school was used as a basis for inclusion in the comparisons. Although four pupils per cell in the comparison results in a very low power rating, power in this first exploratory study with the below mentioned difficulties with

the data is not of primary concern. The major purpose of this data is to give us some prior probability data to be used to compare with FY 1972-73 data. This is the first year of reading projects except for Polacca and Santa Rosa Boarding School and these were only one-half year projects in FY 1970-71 and no CAT data was reported.

There are a number of inherent weaknesses in the present study which should be clarified at the beginning. First of all, any time one school is compared with another school there are factors extraneous to the treatments that may reflect in the results. For example, the pupils in one of the schools may be "culturally retarded", that is retarded in reading because of a lack of exposure to previous reading possibilities; and pupils in the other school may be retarded in reading due to physiological reasons, such as vision problems or mental retardation. Thus, pupils from the first school may be expected to drastically improve in reading upon exposure to reading programs whereas pupils in the second school may not even though procedures in the second school may be superior to those used in the first school. In addition, factors such as parental involvement, persistence of pupils coming from a particular tribe, academic competitiveness of a particular tribe, etc., are unknown factors in this study which may account for observed differences between schools.

Table 42

A Comparison of Pre-Post California Achievement Test  
Total Reading Grade Equivalent Scores at Theodore  
Roosevelt Boarding School, Keams Canyon Boarding  
School (& day), and Hotevilla Day School  
for Grade 4 using 1963 Norms

School	N*	Pre Test	Post Test	Gain
Theodore Roosevelt Brdg.	5	2.38	3.06	+.68
Keams Canyon Brdg. & Day	16	3.64	4.12	+.48
Hotevilla Day School	9	2.98	3.51	+.53

N\* - Number of Students Tested

The results reported in Table 42 show that pupils in Theodore Roosevelt Boarding School gained .68 grades in reading whereas pupils at Hotevilla only gained .53 grades and at Keams Canyon, .48 grades. One explanation for this is that there was an 6-month lapse of time between pre-post tests at Keams Canyon and Hotevilla, in addition, pupils at Theodore Roosevelt Boarding School began the school years reading .60 grade levels below pupils at Hotevilla and 1.26 grade levels below pupils at Keams Canyon. It thus might have taken less training to raise the reading scores of pupils at Theodore Roosevelt. It is somewhat disappointing that pupils in any of the three schools did not gain one month reading for one month of training. However, since this is the first year of the reading projects, there is no expected rate of increase with which to compare these results. Thus all three gain scores may or may not represent vast improvement in reading over what would have occurred without the projects.

Table 43

A Comparison of Pre-Post California Achievement Test  
Total Reading Grade Equivalent Scores Between Theodore  
Roosevelt Boarding School and Keams Canyon Boarding Day  
School for Grades 5 - 8 Using 1963 Norms

School	Grade	N*	Test	Test	Gain
Theodore Roosevelt Boarding	5	7	3.04	4.00	+ .96
Keams Canyon Boarding & Day	5	25	3.68	4.97	+1.29
Theodore Roosevelt Boarding	6	9	3.78	4.76	+ .98
Keams Canyon Boarding & Day	6	16	4.88	5.38	+ .50
Theodore Roosevelt Boarding	7	21	4.08	5.05	+ .97
Keams Canyon Boarding & Day	7	27	4.03	5.68	+1.66
Theodore Roosevelt Boarding	8	27	4.97	5.66	+ .69
Keams Canyon Boarding & Day	8	20	4.26	5.79	+1.52

N\* - Number of Students Tested

These results show that pupils at Theodore Roosevelt Boarding School had higher gains in reading than Keams Canyon Boarding School in grade 6 but Keams Canyon pupils had much higher gains in grades 5, 7, and 8. In fact in grade 8, pupils at Keams Canyon had gain scores more than double those at Theodore Roosevelt in spite of the fact that only six months time elapsed between pre-post tests at Theodore Roosevelt Boarding School. Thus the program at Keams Canyon produced results superior to the program used at Theodore Roosevelt. However both programs produced gain scores of one or more months improvement in reading for every month the pupils were in school except for the 8th grade pupils at Theodore Roosevelt who gained only .69 months in the 8 month program.

Table 44

A Comparison of Pre-Post California Achievement Test  
Total Reading Grade Equivalent Scores Between  
Salt River and Polacca at Grade Three

School	N*	Pre Test	Post Test	Gain
Salt River Day School	11	1.74	2.00	+ .26
Polacca Day School	14	2.49	3.49	+1.00

N\* - Number of Students Tested

The results reported in Table 44 show that pupils at Polacca gained almost four times the reading performance of pupils at Salt River. However, the pre-test was administered at Polacca in April 1971 which gave the pupils 12 months to improve their reading whereas pupils attending Salt River only had 8 month to improve their reading. This does not negate the fact that pupils attending Polacca improved their reading one month for every month between pre and post tests whereas pupils attending Salt River improved their reading by only .3 months for each month in school. Since both schools had similar types of programs, the observed differences must be due to other factors.

Table 45

Pre-Post California Achievement Test Total Reading Test  
Grade Equivalent Scores for Salt River, Polacca,  
Hopi Day, and Second Mesa Day Schools at the  
4th, 5th, & 6th grades Using 1963 Norms

School	Grade	N*	Pre Test	Post Test	Gain
Salt River Day School	4	12	2.49	2.65	+ .16
Polacca Day School	4	22	3.47	4.10	+ .63
Hopi Day School	4	5	3.10	3.76	+ .66
Second Mesa Day School	4	16	3.06	3.73	+ .67
Salt River Day School	5	12	3.01	3.22	+ .21
Polacca Day School	5	27	4.04	4.66	+ .53
Hopi Day School	5	4	4.38	4.45	+ .07
Second Mesa Day School	5	12	3.91	4.82	+ .91
Salt River Day School	6	12	3.86	4.61	+ .75
Polacca Day School	6	13	5.00	5.63	+ .63
Hopi Day School	6	5	4.74	5.34	+ .60
Second Mesa Day School	6	16	4.49	5.49	+ 1.00

N\* - Number of Students Tested

These results show that at every grade level Second Mesa pupils had higher gains in reading than did Salt River, Polacca, and Hopi Day pupils. In fact in the 5th and 6th grades these differences in rate of change between Second Mesa and the other schools were statistically significant. In grade 4 Salt River pupils increased their reading scores an average of only .16 grades and in grade 5 only .21 grades and in both grades Salt River pupils had change scores that were statistically lower than both Polacca and Second Mesa. In addition, grade 5 pupils at Hopi Day had significantly lower increases (+.07 grades) than did pupils at all three of the other school. Everything else equal, pupils attending Polacca should have increased in reading more than pupils at the other schools since the pre-post testing was done 12 months apart whereas it was only 8

months at Salt River and Second Mesa Day and only 7 months at Hopi Day School. The monthly average increase in reading equalled or exceeded one month only in grades 5 and 6 at Second Mesa.



Table 46

Pre-Post California Achievement Test Total Reading Grade  
Equivalent Scores for Casa Blanca, St. Johns, and  
Gila Crossing Schools in Grades 2 and 3 Using  
1963 Norms

School	Grade	N*	Test	Test	Gain
Casa Blanca Day School	2	8	1.20	1.56	+ .36
St. Johns Elementary School	2	7	1.61	2.57	+ .96
Gila Crossing Day School	2	14	1.44	2.08	+ .64
Casa Blanca Day School	3	4	2.27	2.87	+ .58
St. Johns Elementary School	3	8	2.25	3.55	+1.30
Gila Crossing Day School	3	4	2.52	2.90	+ .38

N\* - Number of Students Tested

An examination of Table 46 shows that pupils attending St. Johns had significantly higher increases in reading performance in both the 2nd and 3rd grades than did pupils at Casa Blanca and Gila Crossing. St. Johns pupils had one more month to learn reading between pre-post tests however that one month should not have made as much difference as the present results show. For example, the average monthly increase in reading in the second grade at St. Johns was 1.2 months whereas it was only .45 months at Casa Blanca and .8 months at Gila Crossing.

Table 47

Pre-Post California Achievement Test Reading  
Grade Equivalent Scores for Casa Blanca  
and St. Johns in Grade 4 Using 1963  
Norms

School	N*	Pre Test	Post Test	Gain
Casa Blanca Day School	12	2.61	3.82	+1.22
St. Johns Elementary School	10	3.47	4.37	+ .90

N\* - Number of Students Tested

An examination of Table 47 shows that pupils attending Casa Blanca and St. Johns increased their reading scores one or more months for each month they were in school. In addition, the average gain score at Casa Blanca was .32 months greater than that at St. Johns in spite of the fact that pupils had one month less to learn between pre-post tests at Casa Blanca.

Table 48

Pre-Post California Achievement Test Total Reading Grade  
Equivalent Scores for Second Grade Pupils Attending  
Santa Rosa Boarding/Day School, Kerwo Day School,  
and Vaya Chin Using 1970 Norms

School	N*	Pre Test	Post Test	Gain
Santa Rosa Boarding & Day	21	2.44	2.36	- .08
Kerwo Day School	9	1.82	2.27	+ .45
Vaya Chin Day School	10	1.65	1.40	- .25

N\* - Number of Students Tested

The results show that pupils at Santa Rosa Boarding School decreased their average reading scores .08 months and pupils at Vaya Chin decreased their reading scores one-fourth grade level and appear at first glance to be disappointing. However since this is the first year comparison of Title I projects have been made in the Phoenix Area, there is no base rate against which to compare these results. Certainly it would be better to see 2nd grade pupils increase their reading scores at those two schools, but the decrease may not be as negative as they appear.\* Even so, Kerwo pupils scored significantly higher gain scores than pupils at the other two schools.

\* In addition, the pre-test scores reported at Santa Rosa Boarding School are well above grade level and validity of these pre-test results is highly questionable.

S C I E N C E    C O M P O N E N T S

Chapter IV-C

P H O E N I X      I N D I A N      H I G H      S C H O O L

Science Curriculum Improvement Study (IMPACT)

I. Vital Statistics

- A. School Name and Address: Phoenix Indian High School  
P.O. Box 7188  
Phoenix, Arizona 85011
- B. Component Cost: \$32,655.00
- C. Staffing Pattern: Professional - One Science  
Teacher (Title I)  
Paraprofessional - One  
Teacher Aide (Title I)
- D. Number of Student Participants: 60
- E. Contact Person: Miles Bolinger, Principal
- F. Operational Period: January to May
- G. Years in Operation: One

II. Component Objectives

Sixty (60) students in grades 7-9 will improve their ability to function in the classroom by increasing their individual total grade placement score one year or more as measured by the Metropolitan Achievement Test and will increase their scientific literacy as measured by specific evaluation tools designed by Dr. Fred Staley, Arizona State University.

III. Evaluation

Pre-Mid-Post Metropolitan Achievement Test (Science Battery)

IV. Procedures

The Life Science sequences Environments, Communities, and Ecosystems of the Science Curriculum Improvement Study Program were used to

provide the desired learning experiences to enable students to learn the fundamental concepts of the biological sciences related to their own environment.

Table 49

California Achievement Test - Advance, Form G,  
Phoenix Indian High School

Test Periods	GRADE LEVEL							
	7		8		9		7-9	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (1/5/72)	3	4.73	9	3.91	53	4.40	65	4.35
Post-Test (5/22/72)	1	4.60	4	4.20	38	4.98	43	4.90
Amount of Gain or Loss (+ or -)	—	—	—	—	—	—	—	—
		- .13		+ .29		+ .58		+ .55

N\* Number of Students Tested

Mean\* - Mean Grade Equivalent Score

#### V. Discussion

The Metropolitan Achievement Test results for grades 7-9 are summarized in Table 49. These results show increases in achievement of .29, .58, and .55 years respectively for grades 8, 9, and the combination of grades 7 through 9, and a decrease of .13 years for pupils in grade 7. However these results are somewhat misleading when studied in detail as the results do not show the same pupils on the pre and post tests. Thus, when looking at the results one must be careful not to interpret the reported results as being an accurate reflection of the program.

M A T H E M A T I C S    C O M P O N E N T S

Chapter IV-D

S T E W A R T      I N D I A N      H I G H      S C H O O L

Basic Mathematics Skills

I. Vital Statistics

- A. School Name and Address:                      Stewart Indian High School  
Nevada Agency  
Stewart, Nevada 89437
- B. Component Cost:
- C. Staffing Pattern:                                  Professional - One Math  
Teacher (Title I)  
Eleven Trades-Technical  
and Home Economics  
Staff Members (Title I)  
(Intermittent)  
Paraprofessional - One  
Teacher Aide (Title I)
- D. Number of Student Participants:              60
- E. Contact Person:                                   William C. Whipple
- F. Operational Period:                              November to May
- G. Years in Operation:                              One

II. Component Objectives

To increase mathematics skills as measured by the California Achievement Test - Math sub-tests for students as follows:

15 Ninth Grade Students	3.0 Years
15 Tenth Grade Students	2.5 Years
15 Eleventh Grade Students	2.0 Years
15 Twelfth Grade Students	1.5 Years

III. Evaluation

Pre-Mid-Post California Achievement Test - Mathematics Sub-tests



#### IV. Procedures

Utilizing individualized instructional materials, a mathematics teacher and aide taught basic mathematics concepts and skills. Practical application of mathematics skills was emphasized one hour per week through the involvement of the Trades-Technical and Home Economics Departments. The students were involved one hour per day, five days per week.

Table 50

California Achievement Test - Form W, 1970 Norms,  
Stewart Indian High School

Test Periods	G R A D E L E V E L							
	9		10		11		12	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (11/29/71)	9	5.5	5	5.3	1	5.0	1	5.0
Post-Test (5/22/72)	6	6.6	5	5.9	1	6.4	1	6.8
Amount of Gain or Loss (+ or -)	—	+1.1	—	+0.6	—	+1.4	—	+1.8

N\* = Number of Students Tested

#### V. Discussion

The pre-post California Achievement Test - Mathematics scores for grades 9 to 12 at Stewart Indian High School are reported in Table 50. It should be noted that the pre-test was not administered until November 29, 1971 because the project was late in beginning. The results summarized in Table 50 show there was a marked improvement in mathematics performance in grade 9 (+1.1years), grade 11 (+1.4 years) and grade 12 (+1.8 years) but only moderate improvement in

grade 10 (+.6 years). However, the gain in grade 9 may be somewhat misleading as three pupils who were given the pre-test were not given the post-test. Thus the actual improvement of the six pupils who were post-tested may be more or less than the 1.1 years reported. In addition, it should be pointed out that the results for grades 11 and 12 are based upon the performance of only one pupil per grade.

SPECIAL EDUCATION COMPONENTS

Chapter IV-E

P H O E N I X      I N D I A N      H I G H      S C H O O L

Special Learning Disability Program

I. Vital Statistics

- A. School Name and Address: Phoenix Indian High School  
P.O. Box 7188  
Phoenix, Arizona 85011
- B. Component Cost: \$10,324.00
- C. Staffing Pattern: Professional - Two Special  
Education Teachers (one  
1740 and one Title I)  
Two Home Economics  
Teachers (Part-time)  
(1740)
- D. Number of Student Participants: 60
- E. Contact Person: Miles Bolinger, Principal
- F. Operational Period: September to May
- G. Years in Operation: One

II. Component Objectives

Sixty (60) students, grades 7 to 11, will increase their total grade placement by one year or more as measured by the California Achievement Test - Total Grade Placement.

III. Evaluation

Pre-Mid-Post California Achievement Test

IV. Procedures

A special education teacher provided individualized instruction to students suspected of being emotionally disturbed, learning disabled, and/or borderline mentally retarded.

Two home economics teachers provided instruction concerning basic home making skills, personal hygiene and appropriate health habits.

The full complement of 60 students were not in the Special Education Program because the regular 1740 teacher took maternity leave and then resigned from government service. Because of the freeze on positions we were unable to replace her with another teacher. We also had a similar situation in the Home Economics Department which was to supplement this program. Two teachers retired in this department and the remaining teachers had to teach full-time in the regular program.

Table 51

California Achievement Test - Total Battery, 1963 Edition\*  
Phoenix Indian High School

Test Periods	GRADE LEVEL											
	8		9		10		11		12			
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean		
Pre-Test	0		9	4.9	8	5.1	4	4.2	1	4.2		
Post-Test	1	4.3	8	5.3	10	6.9	6	6.9	1	6.7		
Amount of Gain or Loss (+ or -)	—	—	—	—	—	—	—	—	—	—		
				+ 0.4		+ 1.8		+ 2.7		+ 2.5		

N\* = Number of Students Tested

\* = Grade placement scores - 8th and 9th used Junior High Level; 10th, 11th, and 12th used advanced level

## V. Discussion

The pre-post California Achievement Test - Total Battery scores for grades 9 to 12 at Phoenix Indian High School are summarized in Table 51. An examination of Table 52 shows that pupils in grade 10 increased their total grade placement by 1.8 years, pupils in grade 11 increased theirs by 2.7 years, and the one pupil in grade 12 increased his grade placement by 2.5 years. However, since the grades 10 and 11 more pupils were given the post-test than were given the pre-test the true gains in grade placement may be more or less than the present results indicate. Thus, while the objective of increasing the pupils grade placement by one or more years was met in all three grades, the results for grades 10 and 11 should be interpreted with caution. Pupils in grade 9 increased their total achievement scores an average of .4 years.

## S U M M A R Y

### Cognitive Domain Projects

Projects in the cognitive domain had as their objectives improved reading and communication skills, improved mathematics skills, improved science, and special education opportunities. Procedures selected for reaching stated goals varied greatly and included such things as special purpose instrumentation, individualized teaching techniques, and specialized personnel.

A total of \$812,737 was expended for projects in the cognitive domain. By far the largest concentration of funds, (\$750,720) was in reading projects followed by science projects (\$32,655), math projects (\$19,038), and special education (\$10,324).

In reading there were 34 professional and 50 paraprofessional staff serving 1,718 students. Special education had 1 professional serving 60 students, math and science both had 1 professional and 1 paraprofessional serving 60 students.

An examination of the data pertaining to the reading projects shows that there are no clear-cut conclusions that can be made. Whereas one



school had gains in reading that were higher than the gains reported in another school at one grade level, the trend was often reversed in the next grade level.

Thus more attention needs to be given to evaluating the projects in greater detail so that valid interpretations can be made.

## AFFECTIVE DOMAIN COMPONENTS

### C H A P T E R   V

The affective domain is that realm of behavior which relates to an individuals' feelings, emotions, values, personality and their collective impact upon his individual, social, and academic development. These conditions are characterized by such affective reactions as frustration, deprivation, and gratification. A special condition is the lack of goal clarity generally characterized by various states of anxiety. These behavioral states in turn relate to motives like aggression, affiliation, avoidance, and so forth. As these aspects interact with various situational and personality characteristics, they combine to determine overt behavior. Thus, projects in the affective domain had as primary objectives the improvement of attitudes and/or the reduction of dysfunction kinds of behavior. These objectives fall into three categories: (1) self image improvement, (2) vocational awareness, and (3) dropout prevention and reduction of dysfunctional behavior.

Table 52

Amounts Funded in FY 1972 Title I Affective Domain Components by Agency or School

School/Agency	Affective Domain Components			Totals
	Self Image	Vocation- al Guidnc	Dropout Prevent'n	
<u>Elementary Schools</u>				
Cibecue Day School Theodore Roosevelt John F. Kennedy Day Hopi Day School Hotevilla Day School Keams Canyon Brdg/Day Moencopi Day School Polacca Day School Second Mesa Day Schl Papago Agency Schools Pima Agency Schools Salt River Day School Supai Day School	27,450           8,862			27,450        6,515     8,862
<u>High Schools</u>				
Phoenix Indian High  Sherman Indian High  Stewart Indian High	   48,000	  11,000  18,606	149,548*  45,519	149,548  56,519  66,606
TOTALS	90,827	29,606	195,067	315,500

Table 53

Numbers of Students Participating in FY 1972 Title I Affective Domain Components by Agency or School

Agency - School	Affective Domain Components			Totals
	Self Image	Vocation- al Gudnce	Dropout Prevent'n	
<u>Elementary Schools</u>				
Cibecue Day School	133			133
Theodore Roosevelt				
John F. Kennedy Day				
Hopi Day School				
Hotevilla Day School	30			30
Keams Canyon Brdg/Day				
Moencopi Day School				
Polacca Day School				
Second Mesa Day Schl	66			66
Papago Agency Schools				
Pima Agency Schools				
Salt River Day School				
Supai Day School				
<u>High Schools</u>				
Phoenix Indian High			440	440
Sherman Indian High		120	150	270
Stewart Indian High	60	50	.	110
TOTALS	289	170	590	1,049

Table 54

Number of Professional and Paraprofessional Staff Positions  
Funded by FY 1972 Title I Affective Domain Components by Agency or School

Agency/School	Affective Domain Components						Totals		
	Self Image		Vocational Guidance		Dropout Prevention				
	P	Pp	P	Pp	P	Pp	P	Pp	All
<u>Elementary Schools</u>									
Cibecue Day School		1						1	1
Theodore Roosevelt									
John F. Kennedy Day									
Hopi Day School									
Hotevilla Day Schl									
Keams Canyon Brdg									
Moencopi Day Schl		1						1	1
Polacca Day School									
Second Mesa Day									
Papago Agcy Schools									
Pima Agency Schools									
Salt River Day Schl	1						1		1
Supai Day School									
<u>High Schools</u>									
Phoenix Indian High					7	6	7	6	13
Sherman Indian High						4		4	4
Stewart Indian High	3	4	1	1			4	5	9
<b>TOTALS</b>	<b>4</b>	<b>6</b>	<b>1</b>	<b>1</b>	<b>7</b>	<b>10</b>	<b>12</b>	<b>17</b>	<b>29</b>
<b>COMPONENT TOTALS</b>	<b>10</b>		<b>2</b>		<b>17</b>		<b>29</b>		

P = Professional

Pp = Paraprofessional

Table 55

Number of Regular Program Employees Working in FY 72  
Title I Affective Domain Components  
by Agency or School

Agency/School	Affective Domain Components						Totals		
	Self Image		Vocational Guidance		Dropout Prevention				
	P	Pp	P	Pp	P	Pp	P	Pp	All
<u>Elementary Schools</u>									
Cibecue Day School	1						1		1
Theodore Roosevelt									
John F. Kennedy									
Hopi Day School									
Hotevilla Day									
Keams Canyon Brdg									
Moencopi Day									
Polacca Day School									
Second Mesa Day									
Papago Agcy Schools									
Pima Agency Schools									
Salt River Day Schl									
Supai Day School									
<u>High Schools</u>									
Phoenix Indian High	7					6	10	1	6
Sherman Indian High									
Stewart Indian High									
TOTALS	8	0	0	0	10	7	18	7	25
COMPONENT TOTALS	8		0		17		25		

P = Professional

Pp = Paraprofessional

S H E R M A N      I N D I A N      H I G H      S C H O O L

Apartment Living and Work Experience  
Program

I. Vital Statistics

- |                                    |   |
|------------------------------------|---|
| A. Name and Address of School      | Sherman Indian High School<br>9010 Magnolia Avenue<br>Riverside, California 92503   |
| B. Component Cost:                 | \$11,000.00   |
| C. Staffing Pattern:               | Professional - One Home<br>Economics Department Head<br>(1740)<br>One Teacher (1740)<br>Paraprofessional - One Aide,<br>Teacher |
| D. Number of Student Participants: | 120   |
| E. Contact Person:                 | Michael Ragsdale  |
| F. Operational Period:             |   |
| G. Years in Operation:             | Two   |

II. Component Objectives

One hundred twenty (120) senior students will demonstrate an 85 to 90% increase in knowledge and information about vocational opportunities as measured by the Vocational Guidance Inventory.

One hundred twenty (120) senior students will demonstrate those skills necessary for effectively functioning in an environment outside the boarding school as measured by their ability to handle their experiences in the apartment living situation, i.e., budgeting their expenses, arriving at school on time, personal responsibilities in the up-keep of their apartment, etc.

### III. Evaluation

Pre-Mid-Post Vocational Guidance Inventory

Pre-Mid-Post written reports from employees of work experiences education program

Pre-Post Urban Living Skills Questionnaire

### IV. Procedures

Students were involved in a two phase activity: (1) classroom preparation, and (2) apartment living.

The first phase lasted one hour per day each day for 15 weeks and consisted of instruction regarding: economic management, rules and regulations imposed on apartment dwellers, personal responsibilities and day-to-day living skills.

The second phase consisted of the students actually residing in an apartment for 3 weeks and managing a weekly allowance in order to meet all of their expenses. Three students were grouped for each three week experience.

Table 56

Apartment Living Inventory

Test Periods	N*	Mean
Pre-Test	62	1.45
Post-Test	62	1.60

N\* = Number of Students Tested



## V. Discussion

The pre-post Apartment Living Inventory for senior pupils attending Sherman Indian High School are presented in Table 56. The inventory consists of 30 items which measures a person's confidence about various aspects of apartment living. The higher the reported results the more confident one feels about apartment living. The highest possible score is 2 which shows complete confidence in one's ability to cope with apartment living, a one means the person is not confident and a zero means the person is uncertain whether he feels confident or not. Thus the results reported in Table 56 show an increase of .15 on the post-test which means the pupils were more confident of their abilities at the end of the school year.

S E L F - I M A G E

# T H E O D O R E   R O O S E V E L T   B O A R D I N G   S C H O O L

## Self-Image Stimulus Through Home-Living Experiences

### I. Vital Statistics

- A. School Name and Address: Theodore Roosevelt Boarding  
School  
P.O. Box 567  
Fort Apache, Arizona 85926
- B. Component Cost: \$27,450.00
- C. Staffing Pattern: Professional - One Home  
Economics Teacher (1740)  
Two Teachers (overtime)  
(1740)  
Paraprofessionals - One  
Teacher Aide (Title I)
- D. Number of Student Participants: 133
- E. Contact Person: Glen Sorensen, Principal
- F. Operational Period:
- G. Years in Operation: One

### II. Component Objectives

One hundred thirty-three (133) students will raise their scores to 2.5 on the FAATE Inventory.

### III. Evaluation

Pre-Mid-Post FAATE Self Concept Inventory

### IV. Procedures

#### Activity I

A home economist and teacher aide conducted instructional units in the following areas: General Housekeeping, Grooming and Hygiene, Ettiquette, Sewing, Clothing, Nutrition, Meal Planning, Food Preparation and Serving, Consumer Economics, Child Care, Home Decorating for

Special Occasions. Guest speakers from the Indian community and the surrounding community were solicited for classroom presentations.

The classes were held daily for 1½ hours per day with approximately 14 students in each class.

Table 57

California Achievement Test  
Total Battery

Test Periods	GRADE		LEVEL	
	7th		8th	
	# Students	Mean	# Students	Mean
Pre-Test (Sept. 1971)	25	5.3	19	5.5
Post-Test (May 1972)	35	6.0	21	7.0
Amount of Gain or Loss (+ -)	—	+ .7	—	+ 1.5

Mean = Mean grade equivalent score

Table 58

FAATE Inventory

Test Periods	GRADE		LEVEL	
	7th		8th	
	# Students	Mean	# Students	Mean
Pre-Test (Sept. 1971)	25	9.9	23	9.7
Post-Test (January '72)	23	10.1	19	9.6
Amount of Gain or Loss (+ -)	—	+ .2	—	- .1

N\* = Number of Students Tested

All four sheets totaled before was selected.

## V. Discussion

The pre-mid FAATE Test results for grades 7 and 8 at Theodore Roosevelt Boarding School are reported in Table 58. No post-test was administered because tests were not readily available.

A note of explanation is necessary regarding the FAATE Inventory. FAATE stands for Factors Affecting Attitudes Toward Education. The FAATE is a Likert Scale which evaluates an individual's perception relative to five criteria: (1) self concept; (2) attitude toward teachers; (3) value of education; (4) home attitude toward school; and (5) recreation. For each criterion it was possible to quantify a student's feeling within a numerical range of 1-7. One (1) was construed to be the most positive response, and seven (7) was the most negative. That is as the values move toward one (1) the attitude being measured is thought to be more positive. Conversely, as a value moves toward seven (7) the attitude is thought to be more negative. For example, 1.3 indicates a more positive attitude toward any of the aforementioned criteria than does a 2.7 value. In terms of a pre-post comparison, a pre-score value of 3.1 and a post-score value of 3.9 would suggest that a subject's attitude had become more negative. The specific value obtained for a student is a mean score computed from 12 to 17 responses for each of the five factors. This explanation of the FAATE Inventory will apply to many of the affective domain projects unless otherwise noted. As may be noted in the explanation below, a mid or post-test value which is lower than the pre-test mean indicates that a positive attitudinal change has taken place.

As the results in Table 58 show, tests results were reported only for an overall score on the test with the separate factors ignored. Thus several mutually exclusive raw scores defining different perceptions were added together which means the scores represent a diffuse attitude. The results are therefore uninterpretable.

In addition, the California Achievement Test total battery was administered on a pre-post basis to the target pupils to evaluate the sub-objectives of the affective component. These results are presented in Table 57 and they show that grade 7 pupils gained .7 years and grade 8 pupils gained 1.5 years. Theodore Roosevelt Boarding School had a reading program and some pupils may have been in both components. Thus these results may reflect growth that is due in part to the reading component.

P O L A C C A    D A Y    S C H O O L

Improving Self Image Through  
Native Arts

I. Vital Statistics

- A. School Name and Address: Polacca Day School  
Hopi Agency  
Polacca, Arizona 86040
- B. Component Cost: \$6,515.00
- C. Staffing Pattern: Paraprofessionals - One  
Teacher Aide (Title I)  
15 Artisans (Title I)
- D. Number of Student Participants: 30
- E. Contact Person: Fritz Poocha, Principal
- F. Operational Period:
- G. Years in Operation:

II. Component Objectives

Thirty (30) students, grades 3 to 6, will raise their self image score on the FAATE Inventory to 2.5.

III. Evaluation

Pre-Mid-Post FAATE Inventory

IV. Procedures

Activity I

Groups of six children worked one hour daily with an aide and/or native artisan in a Hopi culture oriented program of arts, crafts and music. Each native artisan provided instruction each day for ten consecutive days.

### Activity II - Art Van

The Art Van staff provided services four days during the 1971-72 school year. During each visit the Title I reading groups participated in two working sessions lasting 45 minutes to an hour and one half. Each session related the use of art and cultural heritage to teach reading effectively. Some examples of the lessons included: puppets, drawing on leather skins, making models of shields, and painting murals. These projects were presented with vocabulary and concept building activities which related to the reading program.

Teacher workshops were held where school personnel desired. These workshops lasted two hours one or two days per visit.



Table 59

F.A.A.T.E. Inventory - Self  
Concept Scores

Test Period	Grade 1		Grade 2		Grade 3		Grade 4		Grade 5		Grade 6	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test	8	54.8	7	69.7	6	70.3	8	64.8	13	62.8	8	62.5
Post-Test	8	17.0	7	8.6	6	10.0	8	26.3	13	36.5	8	37.5
Amt of Gain or Loss	—	—	—	—	—	—	—	—	—	—	—	—
		-37.8		-61.1		-60.3		-38.5		-26.3		-25.0

N\* = Number of Students Tested

Mean = Mean Percentile

## V. Discussion

The results of the FAATE Inventory, self-concept scale, for grades 1-6 at Polacca Day School are summarized in Table 59. It is important to point out that the scoring system for the FAATE was somewhat different than in other projects. The scores reported are percentages of items in the self-concept scale that the students responded to in a negative manner. For example, there were 17 items in the scale and in grade one on the pre-test the eight pupils responded to an average of 54.8% of these 17 items in a negative manner. An examination of these results shows that the negative responses decreased a minimum of 25 percent (grade 6) to a maximum 61.1% (grade 2). Thus in every grade pupils self concepts became more positive as measured by the FAATE.

S A L T    R I V E R    D A Y    S C H O O L

Counseling and Guidance

I. Vital Statistics

- |                                    |  |
|------------------------------------|--|
| A. School Name and Address:        | Salt River Day School<br>Route 1, Box 117<br>Scottsdale, Arizona 85256 |
| B. Component Cost:                 | \$8,868.00   |
| C. Staffing Pattern:               | Professional - One Counselor<br>(Title I)                              |
| D. Number of Student Participants: | 66   |
| E. Contact Person:                 | Principal  |
| F. Operational Period:             | September to May   |
| G. Years in Operation:             | Two  |

II. Component Objectives

Sixty-six (66) students, grades 1 to 6, will increase their self image scores on the FAATE Inventory to 2.5.

Sixty-six (66) students, grades 1 to 6, will increase their California Achievement Test scores by 1.0 years.

III. Evaluation

Pre-Mid-Post FAATE Inventory

Pre-Mid-Post California Achievement Test

IV. Procedures

Students received intensive and individualized counseling and guidance services conducted by a guidance counselor. Each student spent at least one 20-minute session each week with the counselor in a group or individual session.

The counselor was responsible for being a liaison between school and involved community members.

Table 60  
California Achievement Test  
Total Battery ('63 Norms)

Test Periods	GRADE LEVEL											
	1		2		3		4		5		6	
	N	M	N	M	N	M	N	M	N	M	N	M
Pre-Test (9/18/71)	14	.2	10	1.0	12	1.9	11	2.3	13	2.9	10	3.0
Post-Test (5/15/72)	14	1.1	10	1.6	12	2.7	11	3.1	13	3.2	10	4.7*
Amount of Gain or Loss (+ -)	-	-	-	-	-	-	-	-	-	-	-	-
		+ .9		+ .6		+ .8		+ .8		+ .3		+ 1.7*

N = Number of Students Tested

\* = Validity questionable

M = Mean grade equivalent score

Table 61  
FAATE Inventory

Test Periods	GRADE LEVEL							
	3		4		5		6	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (Nov. 2, 1971)	12	2.13	11	2.02	9	2.12	11	1.81
Post-Test (May 15, 1972)	12	2.77	11	3.03	9	2.20	11	2.74
Amount of Gain or Loss (+ -)	—	—	—	—	—	—	—	—
		+ .64		+ 1.01		+ .08		+ .93

N\* = Number of Students Tested

Mean = Mean grade equivalent score

V. Discussion

The pre-post FAATE Test results for grades 3 to 6 at Salt River Day School are summarized in Table 61. It should be noted that the self image scores are the only ones reported. Since an increase in score from pre to post test denotes a move toward a more negative attitude, and since all average grade level scores increased, this means the pupils had a more negative self image at the completion of the program than when they began.

The California Achievement Test - Total Battery results were summarized in Table 60. These results show gains of about .8 to .9 years for grades 1, 3, and 4, gains of .6 years for pupils in grade 5, and marked gains for pupils in grade 6 of 1.7 years.

S T E W A R T       I N D I A N       H I G H       S C H O O L

Environmental Enrichment to Increase Self-  
Concept

I. Vital Statistics

- A. School Name and Address:                      Stewart Indian High School  
   Nevada Agency  
   Stewart, Nevada 89437
- B. Component Cost:                                      \$48,000.00
- C. Staffing Pattern:                                    Professional  
   1 Project Coordinator  
   (Title I)  
   1 Counselor/Student  
   Activities Specialist  
   (Title I)  
   1 Project/Student Enter-  
   prise Manager (Title I)  
   Paraprofessional  
   4 Aides (Title I)  
   40 Native Artists (part-time)
- D. Number of Student Participants:                60
- E. Contact Person:                                      William C. Whipple
- F. Operational Period:                                January to May
- G. Years in Operation:                                One

II. Component Objectives

To reduce by  $\frac{1}{2}$  the number of students exhibiting negative self concepts and emotional instability as measured by selected personality tests and by a reduction in self-destructive acts, persistent depression, and carelessness in personal habits.

To increase positive attitudes of students toward their school, its facilities and their relationship to it as measured by a reduction in instances of destructive behavior, an increase in involvement

in school activities and an increase of 1.5 years in achievement as measured by the California Achievement Test.

### III. Evaluation

Pre-Mid-Post Benton-Flores, Self Concept Inventory

Pre-Mid-Post Frequency of Reported Self-Destructive Acts

Pre-Mid-Post Frequency of Observed Instances of Continuing Depression

Pre-Mid-Post California Achievement Test

### IV. Procedures

This activity consisted of a 3-phase operation:

Phase I - Needs Assessment

Phase II - Planning

Phase III - Initiation of Services

All services resultant from Phases I & II were geared toward the creation of experiences conducive to positive growth.

These experiences included: (1) Dormitory Beautification, (2) Civic Improvements, (3) Student Profit-Making Enterprises, (4) Cosmetology, (5) Recreation, (6) Arts and Crafts, (7) Ecology, and (8) Health and Hygiene, etc.

Table 62

Comparison between Pre and Post Test Mean Scores on the FAATE.  
 Semantic Differential Administered in January and May  
 1972 to Male and Female Students in Grades Pre-  
 High Through Twelfth

Test Periods	FAATE - Semantic Differential Factor Scales									
	Self Concept		Value of Education		Home Attitude Toward School		Attitude Toward Teachers		Attitude Toward Recreation	
	N*	Pre	N*	Pre	N*	Pre	N*	Pre	N*	Pre
Pre-Test (January 1972)*		3.5		2.9		2.5		3.0		3.1
Post-Test (May 1972)**		2.9		2.6		2.8		2.8		2.9
Amount of Gain or Loss *** (+ or -)		— +0.6		— +0.3		— -0.3		— +0.2		— +0.2

N\* = Number of Students Tested

\* = 58 students responding

\*\* = 57 students responding

\*\*\* = These results are presented as an increase or decrease in positive attitude not as an increase or decrease in score value



The data presented in Table 62 presents pre and post test mean scores of target students on the semantic differential scale of the FAATE. (Only the semantic differential scale was utilized in this project). From the data presented it is possible to see that some measured improvement in attitude occurred during the project period. The largest gain is in Self Concept with smaller improvements in the categories Value of Education, Attitude Toward Teachers, and Attitude Toward Recreation. The only loss is in Home Attitude Toward School. The overall gains represented by the test data, especially in the area of Self Concept, would seem to indicate some positive growth associated with the project period.

Table 63

Comparison Between Pre and Post Test Grade Equivalent Scores on the Metropolitan Achievement Test Administered in September 1971 and April 1972 to Male and Female Students in the Pre-High Grade

Test Periods	Metropolitan Achievement Test							
	Reading		Math		Science		Social Studies	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (September 1971)*		5.54		4.38		4.28		4.98
Post-Test (May 1972) *		6.72		5.08		5.42		6.70
Amount of Gain or Loss (+ or -)		— +.98		— +.70		— +1.14		— +1.72

N\* = Number of Students Tested

\* = 5 Students responding

The data presented in Table 63 represents the pre-post mean grade equivalent scores for target students in the pre-high grade. Although the sample is small ( $n=5$ ), it is important to note that significant growth was made in each subject area tested, from .7 to 1.72 grade equivalent years on the average in all subject areas.

Table 64

Comparison Between Pre and Post Test Percentile Scores on Metropolitan Achievement Test  
Administered in September 1971 and April 1972 to Male and Female Students in Grades  
Nine Through Twelve

Test Periods	Metropolitan Achievement Test													
	R E A D I N G							M A T H						
	9	10	11	12	9	10	11	12	9	10	11	12	9	10
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (September 1971)		43.5		44.6		34.0				41.6		40.0		45.7
Post-Test (April 1972)		37.8		55.0		36.8				41.0		41.7		36.9
Amount of Gain or Loss (+ or -)	—	—	—	—	—	—	—	—	—	—	—	+1.7	—	-8.8
		-5.7		+10.4		+2.8				-0.6				

N\* = Number of Students Tested

The data presented in Table 64 represents academic growth for target students in grades nine through twelve. Since grade equivalent scores for these grade levels were not available percentile scores based on local norms were used instead. The results are obviously mixed showing some positive changes but also some losses in tested levels of achievements.

Students in grade nine showed a decline in percentile ranking in relation to peers on local norms of 5.7 percentiles in reading and .6 percentiles in math. Students in grade ten showed the most positive gains in terms of percentile ranking with local norms, advancing 10.4 percentiles in reading and 1.7 in math. Students in grades 11 and twelve showed a gain of 2.8 in reading but a significant loss of 8.8 in math.

With the exception of target students in grade 8 it is difficult to establish any definitive grade equivalent growth or loss for target students. It would appear that the most positive results occurred with students in grade 10. Other project records indicate that students in this grade were the most involved with project activities; however, any conclusions regarding academic growth and the project would seem rather tenuous given the above results.

Table 65

Comparison of Incidents of Dysfunctional Behavior Among  
the Target Group Students Before (August to December  
1971) and During (January to May 1972) Project  
Activities

Reporting Period	Number of Students	Number of Infractions
August to December	62	41
January to May	62	26
Difference		-15

Table 65 represents the tally of incidents of dysfunctional behavior reported by boys and girls guidance departments before and during the project. Reports were made on all target students and alternates before the project (the period from August to December) and during project activities (January to May). As Table 4 indicates incidents of dysfunctional behavior for target students decreased by approximately 1/3 during the project as compared with the period before the project began.

BEHAVIOR PROBLEMS  
AND DROP-OUT PREVENTION

S H E R M A N    I N D I A N    H I G H    S C H O O L

Behavioral Problems and Drop-Out Rate

I. Vital Statistics

- A. School Name and Address: Sherman Indian High School  
9010 Magnolia Avenue  
Riverside, California 92503
- B. Component Cost: \$45,519.00
- C. Staffing Pattern: Professional - One Program  
Director (1740)  
One Recreation Specialist  
( $\frac{1}{2}$  time) (1740)  
One Recreation Specialist  
(1/10 time) (1740)  
One Educational Psycholo-  
gist ( $\frac{1}{2}$  time) (1740)  
One Fine Arts Specialist  
( $\frac{1}{2}$  Time) (1740)  
One Social Worker (1740)  
(1/10 Time)  
Two Teacher Supervisors  
(1/10 Time) (1740)  
Four Counselors (3/5 Time)  
(1740)  
One Counselor ( $\frac{1}{2}$  time)  
One Clinical Nurse ( $\frac{1}{2}$  Time)  
(Public Health Service)
- Paraprofessionals - Four  
Recreation Aides (Title I)
- D. Number of Student Participants: 150
- E. Contact Person: Michael Ragsdale
- F. Operational Period: September to May
- G. Years in Operation: Two

II. Component Objectives

One hundred fifty (150) students, grades 9-12, will decrease the incidents of behavioral problems involving drinking, fighting, etc.

by 30% as documented by daily pupil personnel reports in comparison with reports from two previous years.

One hundred fifty (150) students, grades 9-12, will reduce their drop-out rate by 30% as compared to statistics from the previous two years.

### III. Evaluation

Comparison of daily pupil personnel reports and drop-out rate with reports from the two previous years.

### IV. Procedures

#### Activity I

Students were involved in formal and informal group discussions, interest trips, recreation center activities and arts and crafts activities in the dormitory and arts and crafts center. The purpose of the activities was to offer students an avenue for school involvement. The students were encouraged to plan their activities and to assume responsibility for their organization and implementation.



Table 66

Comparison of the Number and Percent of Student Dropouts,  
Drinking, and Glue Sniffing Incidents in the 1969-70,  
1970-71 and 1971-72 School Years for Students  
in Grades 9-12

School Year	Total Enrollment	D R O P O U T S		Number & Student Ratio of Reported Incidents			
		Number	Percent of Total Enrollment	Drinking Incidents	Ratio Per Student	Glue Sniffing Incidents	Ratio Per Student
1969-70	611	162	26.5%	819	1.18	330	.54
1970-71	637	111	17.4%	515	.81	215	.34
1971-72	639	130	20.3%	478	.75	238	.37

## V. Discussion

Table 66 presents a comparison of dropout rates and incidents of drinking and glue sniffing at Sherman Indian High School for 1969-70, 1970-71 and 1971-72. The results summarized in Table 66 show that the number of dropouts for 1971-72 is an increase from the number reported in 1970-71. The percent of students dropping out in 1971-72 was 20.3% whereas it was only 17.4% in 1970-71. On the other hand, there is clearly a progressive decrease in the number of drinking incidents from 1969-70 to 1970-71 and to 1971-72 even though total school enrollment increased over the three year period. The number of glue incidents shows an increase from the number reported in 1970-71 of 23 incidents but the increase was not enough to reach the high incidence rate reported in 1969-70.

P H O E N I X      I N D I A N      H I G H      S C H O O L

Adjustment Through Guidance and A Culturalized  
Arts and Crafts Program

I. Vital Statistics

- A. School Name and Address: Phoenix Indian High School  
P.O. Box 7188  
Phoenix, Arizona 85011
- B. Component Cost: \$149,548.00\*
- C. Staffing Pattern: Professional - Six Counselors  
(Title I)  
One Art Teacher (Title I)  
Paraprofessional - Six  
Teacher Aides (Title I)  
Six Dormitory Aides (1740)
- D. Number of Student Participants: 440
- E. Contact Person: Miles Bolinger, Principal
- F. Operational Period:
- G. Years in Operation: One

II. Component Objectives

Four hundred forty (440) students in grades 7-12 will decrease their incidents of behavioral problems involving drinking, fighting, sniffing, etc. by 30% as measured by pupil personnel reports and dormitory reports.

Four hundred forty (440) students in grades 7-12 will lower their drop-out rate by 30% as compared to the 1968-70 dropout rates. Four hundred forty students in grades 7-12 will increase their total grade placement two years or more as measured by the California Achievement Test.

### III. Evaluation

Quarterly comparison of incidents of misbehavior utilizing daily and weekly pupil personnel data.

Quarterly comparison of dropout rates compared to data from two previous school years.

Pre-Mid-Post California Achievement Test - total grade placement

### IV. Procedures

#### Activity I

One full time counselor was placed in each of six dorms to provide individual and group counseling activities. When possible counseling involved parents, guardian and/or tribal representatives.

#### Activity II

One art teacher and six teacher aides provided arts/crafts activities as a form of recreation in the dormitories.

#### Activity III - ZOOM

A commercial, highly structured package marketed by Success Motivation Inc. was utilized for 44 of the target group students. The structure of this program presented the opportunity for the students in small group sessions to establish and pursue goals which were both desirable and meaningful within six basic realms. These areas were:

- |                |               |
|----------------|---------------|
| 1. educational | 4. vocational |
| 2. social      | 5. ethical    |
| 3. physical    | 6. financial  |

#### Activity IV - Art Van

The Art Van staff worked with dormitory students in staff a total of ten days during the 1971-72 school year. Projects included: cloth banners, clay activities, leather works, decoupage, as well as decorations and designs appropriate for dormitory rooms.

Table 67

California Achievement Test - Total Battery  
1963 Edition\*, Phoenix Indian School

Test Periods	GRADE LEVEL											
	7		8		9		10		11		12	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (September 28, 1971)	3	6.4	8	6.3	21	6.9	25	7.4	45	8.2	41	8.8
Post-Test (March 7, 1972)	6	6.6	8	6.9	42	7.0	35	7.6	28	8.0	43	8.9
Amount of Gain or Loss (+ or -)	—	—	—	—	—	—	—	—	—	—	—	—
	+	.2	+	.6	+	.1	+	.2	-	.2	+	.1

\* = Grade Placement

N\* = Number of Students Tested

Major Infractions of Title I Target Students at Phoenix Indian High School for school years 1970-71 and 1971-72.

<u>School Year</u>	<u>Average Number of Major Infractions Per Student</u>
1970-71	5.3
1971-72	4.5

A Comparison of Student-Body Dropout Rate at Phoenix Indian High School for school years 1968-1971 with Title I Target Student Dropout Rate for school year 1971-72.

Table 68

School Year	Dropout Rate for P.I.H.S. Students	
	Total Student Body	Title I Target Group
1968-69	18%	
1969-70	19%	
1970-71	21%	
1971-72		34%

Table 69

Major Infractions of Title I Target Students

Test Periods	Grades 7 - 12	
	N*	Mean
1970-71	468	5.3 <sup>a</sup>
1971-72		4.5 <sup>b</sup>
Amount of Gain or Loss (+ -)		- .8

N\* = Number of Students Tested

a = Figure based on 20% random sample of 1971-72  
target students who were in school at PIHS  
in 1970-71

b = Figure based on study of 468 student records

Drop-out Rate of all Students at Phoenix Indian High School for  
School Years 1969-70, 1970-71, and 1971-72.

<u>School Year</u>	<u>Percent</u>
1968-69	18%
1969-70	19%
1970-71	21%

Title I Target Group Students Dropout Rate for 1971-72: 34%



OBJECTIVES:

1. Demonstrate positive attitudes toward school by increased participation, attendance, and involvement.
2. To show an increase in personal motivation by increased achievement results in academic and non-academic activities.
3. Exhibit a stronger self-image and desire for accomplishment by eliminating negative behaviors.
4. Show evidence of increased achievement motivation through higher verbal scores on standardized tests.
5. Demonstrate a desire for success and future accomplishment by setting long-range and short-range goals.
6. Show evidence of breaking the "failure cycle" by desiring to graduate from high school and select a career.
7. Exhibit personal motivation and high self-concept through more careful grooming.

Table 70

Evaluation Method	Objectives	Results
J.I.M. Inventory	1	Mean pre-test scores, 100.0: Mean post-test score, 100.1: No significant difference.
California Achievement Test	2, 4	Mean gain for 42 students, 0.3 for the entire year. This was .17 less mean gain of school. No significant difference.
Observer Evaluation	7	No significant difference. Vocabulary of taped material seemed to be too difficult - students often did not understand material. Students would not accept peer group leadership. They did not cooperate with trained "keys" or the group leaders.
Personal Plan of Action Forms	5, 6	Students did not follow through in using these forms.
Participant Evaluations	6	Only received evaluation from 10-30 students. Six were positive, four were negative.

Continuation

Evaluation Method	Objectives	Results
School Infraction Reports		2.1 infractions per student for one semester. Slightly lower than other target group students. No significant difference.
Attendance Records	1, 3, 6	Attendance record poor. Eight unexcused absences per student per semester was the average for the four groups. Twelve of the 42 students dropped from school during the semester, 29%.

## V. Discussion

### Activity I

The pre-post California Achievement Test total battery test scores for grades 7-12 at Phoenix Indian High School are summarized in Table 67. An examination of Table 67 shows relatively small gains in grade placement for grade 7 (+.2 years), grade 9 (+.1 years), grade 10 (+.2 years), and grade 12 (+.1 years). The results for grade 11 are especially disappointing as the pupils lost .2 years of total grade placement. The best gain of +.6 years was found in pupils in grade 8.

Table 69 presents a summary of the major infractions committed by the target pupils at Phoenix Indian High School for the 1970-71 and 1971-72 school years. The reported results shows there was a 15% decrease in major infractions by the target pupils in 1971-72. Since the objective called for a reduction of infractions of 30%, the objective was not met, however this does not dampen the fact that a 15% reduction, from a practical standpoint, is significant.

A comparison of dropout rates of all pupils at Phoenix Indian High School for the 1968-69, 1969-70, and 1970-71 school years with the 1971-72 target pupils is presented in Table 68. An examination of Table 68 shows that the target pupils had a 13% higher dropout rate for 1971-72 than did all pupils in 1970-71. However it is unknown how large the dropout rate would have been in 1971-72 had the program not been in effect. The objective of reducing the target pupils dropout rate to 30% below the dropout rate of the prior years pupils was not met.

Activity II - Project ZOOM

Data was too sketchy and not presented in a readily interpretable form. From the available data, Table 70, it seems that none of the seven objectives were met.

VOCATIONAL  
AWARENESS

S T E W A R T      I N D I A N      H I G H      S C H O O L

Vocational Awareness for Education & Work

I. Vital Statistics

- A. School Name and Address:                      Stewart Indian High School  
Nevada Agency  
Stewart, Nevada 89437
- B. Component Cost:
- C. Staffing Pattern:                                  Professional  
1 Voc. Counselor (Title I)  
3 PPS Counselors (1740)  
    (Intermittent)  
2 English Teachers (1740)  
    (Intermittent)  
1 Human Relations Teacher  
    (Intermittent) (1740)  
1 Occupational Training  
    Instructor (Intermittent)  
    (1740)  
  
Paraprofessional  
1 Assistant (Title I)
- D. Number of Student Participants:              50
- E. Contact Person:                                  William C. Whipple
- F. Operational Period:                              October to May
- G. Years in Operation:                              Two

II. Component Objectives

Fifty (50) students, grades 11 and 12, will demonstrate their vocational awareness based upon their performance on the Vocational Guidance Inventory.

III. Evaluation

Pre-Mid-Post Vocational Guidance Inventory

Pre-Mid-Post VGI- Control Group

#### IV. Procedures

The fifty target group students were involved in a highly specialized, intensive program designed around direct contact with: job situations, occupationally knowledgeable people, Indian speakers, vocational counseling sessions and role playing situations designed to teach basic job procurement procedures.

Table 71  
Vocational Guidance Inventory

Test Periods	GROUP AND GRADE LEVEL							
	CONTROL				TITLE I			
	11th		12th		11th		12th	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (9/18/71)	23	38.4	23	40.3	23	38.0	23	36.9
Post-Test (May 1972)	19	39.6	18	41.2	19	39.7	18	43.2
Amount of Gain or Loss (+ or -)	—	+ 1.2	—	+ .9	—	+ 1.7	—	+ 6.3

N\* = Number of Students Tested

#### V. Discussion

The pre-post Vocational Guidance Inventory for 11th and 12th grade target and control group pupils at Stewart Indian High School are presented in Table 71. An examination of Table 71 shows that in the 11th grade the expected increase in vocational awareness without any special program is 1.2 points on the inventory. The target pupils exceeded this amount by .5 points. The expected growth for 12th grade pupils was .9 points and the target pupils exceeded this by 5.4 points. It should be noted, however, that four 11th grade pupils who received

the pre-test were not given the post-test. The present results might change in unknown directions if the same pupils had been pre and post tested.



## S U M M A R Y

### Affective Domain

There were a number of different components in the affective domain however they can be categorized into three broad areas: "increasing the self image" of the pupils, vocational guidance, and dropout prevention. A total of \$315,500 was expended for projects in the affective domain. Most of this total, 61.8% or \$195,067, was used in dropout prevention projects where seventeen professional and seventeen paraprofessional staff members served 590 pupils. The second largest expenditure was in the area of increasing self image (\$90,827) where twelve professionals and six paraprofessionals worked with 289 pupils. The smallest expenditure was in vocational guidance (\$29,606) where one professional and one paraprofessional worked with 170 pupils.

The results presented in the affective domain show that the dropout prevention program was not as successful this year as it was last year. For example, at Sherman Indian High School the dropout rate increased 2.9% (from 17.4% to 20.3%) over FY 1970-71. The projects in the self image area are not comparable since each project used a different scoring system for the FAATE test. However, the results do show positive increases in attitudes toward self and this means the projects were successful. In the vocational guidance area data was presented which showed pupils became more vocationally aware.

## PSYCHOMOTOR DOMAIN COMPONENTS

### C H A P T E R   V I

The psychomotor domain refers to the general area of neuromuscular development. This would include health, hygiene, and physical fitness.

Tables 72, 73, and 74, shows there were two professional and seven paraprofessional Title I staff working with 670 pupils in six schools and the total amount of money expended was \$90,405.

Table 72

Amounts Funded in FY 1972 Title I Psychomotor Domain  
Components by Agency or School

Agency or School	Psychomotor Domain Components	
	Physical Fitness	Totals
<u>Elementary Schools</u>	\$	\$
Cibecue Day School		
Theodore Roosevelt Boarding		
John F. Kennedy Day School		
Hopi Day School	8,296	8,296
Hotevilla Day School		
Keams Canyon Boarding/Day	28,627	28,627
Moencopi Day School		
Polacca Day School	3,472	3,472
Second Mesa Day School	5,555	5,555
Papago Agency Schools		
Pima Agency Schools		
Salt River Day School	21,907	21,907
Supai Day School		
<u>High Schools</u>		
Phoenix Indian High		
Sherman Indian High	22,548	22,548
Stewart Indian High		
TOTALS	90,405	90,405

Table 73

Numbers of Students Participating in FY 1972 Title  
I Psychomotor Domain Components by Agency  
of School

Agency/School	Psychomotor Domain Components	
	Physical Fitness	Totals
<u>Elementary Schools</u>		
Cibecue Day School		
Theodore Roosevelt Boarding		
John F. Kennedy Day School		
Hopi Day School	61	61
Hotevilla Day School		
Keams Canyon Boarding/Day	159	159
Moencopi Day School		
Polacca Day School	164	164
Second Mesa Day School	89	89
Papago Agency Schools		
Pima Agency Schools		
Salt River Day School	107	107
Supai Day School		
<u>High Schools</u>		
Phoenix Indian High		
Sherman Indian High	90	90
Stewart Indian High		
TOTALS	670	670

Table 74

Number of Professional and Paraprofessional Staff Positions Funded by FY 1972 Title I Psychomotor Domain Components by Agency or School

Agency/School	Psychomotor Domain Components				
	Phys. Fitness		Totals		
	P	Pp	P	Pp	All
<u>Elementary Schools</u>					
Cibecue Day School					
Theodore Roosevelt Brdg					
John F. Kennedy Day					
Hopi Day School					
Hotevilla Day School					
Keams Canyon Brdg/Day	1	2	1	2	3
Moencopi Day School					
Polacca Day School		1		1	1
Second Mesa Day School		1		1	1
Papago Agency Schools					
Pima Agency Schools					
Salt River Day School	1	2	1	2	3
Supai Day School					
<u>High Schools</u>					
Phoenix Indian High					
Sherman Indian High		1		1	1
Stewart Indian High					
TOTALS	2	7	2	7	9

P = Professional

Pp = Paraprofessional

Table 75

Number of Regular Program Employees Working in FY 1972  
 Title I Psychomotor Domain Components by  
 Agency or School

Agency/School	Psychomotor Domain Components				
	Phys. Fitness		Totals		
	P	Pp	P	Pp	All
<u>Elementary Schools</u>					
Cibecue Day School					
Theodore Roosevelt Brdg					
John F. Kennedy Day					
Hopi Day School	2	1	2	1	3
Hotevilla Day School					
Keams Canyon Brdg/Day	1		1		1
Moencopi Day School					
Polacca Day School					
Second Mesa Day School					
Papago Agency Schools					
Pima Agency Schools					
Salt River Day School					
Supai Day School					
<u>High Schools</u>					
Phoenix Indian High					
Sherman Indian High	2		2		2
Stewart Indian High					
TOTALS	5	1	5	1	6

P = Professional

Pp = Paraprofessional

K E A M S   C A N Y O N   B O A R D I N G   S C H O O L

Intensive Physical Development and Recrea-  
tional Program

I. Vital Statistics

- A. Name of School and Address:                      Keams Canyon Boarding School  
   Hopi Agency  
   Keams Canyon, Arizona 86034
- B. Component Cost:    \$28,627.00
- C. Staffing Pattern:    Professional - One Physical  
   Education Instructor  
   (Title I)  
   Paraprofessional - Two  
   Recreation Aides (Title I)
- D. Number of Student Participants:                      159
- E. Contact Person:    Mrs. Grace Christiansen,  
   Principal
- F. Operational Period:    September to May
- G. Years in Operation:    One

II. Component Objectives

To raise the scores of 159 students, grades B-8, to the 50th percent-  
tile or higher as measured by the Glover Youth Fitness Test.

III. Evaluation

Pre-Mid-Post Glover Youth Fitness Test

Pre-Mid-Post President's Test on Physical Fitness

IV. Procedures

Each target student in grades B-3 received  $\frac{1}{2}$  hour experience daily  
in planned activity suited to his age/grade level and programmed to  
correct his deficiencies.

Each target student in grades 4-8 was involved in suitable activities for 55 minutes per day. These activities included tumbling, rhythmic exercises, etc.

After-school and evening activities were utilized to further reinforce skills. These activities ranged from team sports to an inter-mural, precision and demonstration.

Individual tutoring and instruction was made available on the basis of need.

#### Glover Youth Fitness Test

- A. Two six year old boys and one seven year old girl were dropped from the target group after the mid test because their coordination had improved to the degree that they no longer required the individual attention given in the target group.
- B. During the mid-test one eight year old girl had a broken arm and could not take the mid-test. Because of her arm she was unable to put the amount of effort required for the post-test in those activities that measured upper arm and shoulder strength.
- C. The high percentile gain evidenced in children in 6-9 age groups may have been because exercises were fun for them to do. The children often times practiced their exercises at night in the dormitory or in their homes. The evening activities (play/games) encouraged this.



- D. At these ages most of the children were developing their fine muscle coordination as well as large muscle groups and respond to routine as developmental.

#### President's Physical Fitness Test

- A. One twelve year old girl moved before the mid-tests were given. This accounts for the decrease in the number in the group as shown on the evaluation chart.
- B. The percentile gain was not as great as it was in the younger children in the target group: "Normal" developmental rate of growth and adaptability may have been a deterrent. Extra-curricular activities intruded somewhat on the routine of the older children. They are not as self-motivating toward routine as the younger group.
- C. Some of the children may have purposely tried to score lower on the post-test because they assumed this was the test that would determine if they were to be in the target group next year, and it developed as a "status" thing to a "target" member. Many of the children who were not in the target group made comments to the effect that they were going to try and make low scores on the pre-test next year so they could be in the target group.

#### California Achievement Tests

The lower scores achieved by the eighth grade children may have been due to the timing of the tests. The children were planning and earning money for a trip to Disneyland. Excitement was high and concentration extremely erratic.

Lack of improvement in California Achievement Test score at the third grade level is inexplicable.

Table 76

California Achievement Test - Total  
Battery, Keams Canyon Brdg Schl

Test Periods	GRADE LEVEL															
	1		2		3		4		5		6		7		8	
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (October 5, 1971)		Grade Placements														
Mid-Test (January 7, 1972)	14	1.0	20	2.9	15	3.5	18	5.0	15	4.3	11	5.7	21	5.9	16	7.2
Post-Test (April 5, 1972)	14	2.0	20	3.2	15	3.5	19	5.3	15	5.3	11	6.4	24	7.0	14	7.0
Amount of Gain or Loss (+ -)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		+1.0		+ .3		0		+1.0		+1.5		+ .7		+1.1		- .2

N\* = Number of Students Tested

Table 77

Glover Youth Fitness Test  
Keams Canyon Brdg School

Test Periods	G I R L S						B O Y S					
	6			7			8			9		
	A G E			L E V E L			A G E			L E V E L		
	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean	N*	Mean
Pre-Test (August 28 & 29, 1971)	5	15	18	10	12	8	13	8	13	18	5	13
Mid-Test (December 15 & 16, 1971)	5	34	18	41	11	34	13	29	41	44	5	59
Post-Test (May 1 & 2, 1972)	5	53	17	50	12	55	13	48	50	73	5	55
Amount of Gain or Loss (+ -)	—	—	—	—	—	—	—	+40	—	+55	—	+42
		+38		+40		+47		+40		+65		+43

Average mean increases 35.4 (all age/grade groups)

6-9 year olds 66.25% (gain over objective by 16.2 percentile)

N\* = Number of Students Tested

Table 78

President's Test on Physical Fitness  
Keams Canyon Boarding School

Test Periods	G I R L S										B O Y S									
	A G E										L E V E L									
	10		11		12		13		14		10		11		12		13		14	
	N	M	N	M	N	M	N	M	N	M	N	M	N	M	N	M	N	M	N	M
Pre-Test (August 28 & 30, 1971)	3	23	10	21	8	19	13	19	5	18	12	19	4	19	12	15	7	15	7	19
Post-Test (May 1 & 2, 1972)	3	23	10	43	7	49	13	43	5	49	12	30	4	30	12	35	7	30	7	31
Amount of Gain or Loss (+ -)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
		0		+22		+30		+24		+31		+11		+21		+20		+15		+12

N\* = Number of Students Tested

M = Mean

Mean score 41. percentile all children 10-14  
Average gain 22%

V. Discussion

The pre-post Glover Physical Fitness Test results for 6-14 year old girls and boys at Keams Canyon Boarding School are summarized in Tables 77-78. An examination of Tables 77-78 shows that the 50th percentile objective was met or surpassed for girls and boys age 6, 7, and 8. In addition, 9 year old boys were able to surpass the 50th percentile national average by five points. All other age levels, except 10 year old girls, increased their physical fitness percentile ranking by from 12 to 40 points.